

Asia Pacific tops list of most impacted by weather perils

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Climate change will be the main driver of future economic risks, with countries in the Asia Pacific region among the most vulnerable to extreme weather events, according to [new analysis](#).

Four weather perils—floods, [tropical cyclones](#), [winter storms](#) and severe thunderstorms—account for the largest share of economic losses from natural disasters globally, according to a report by the Swiss Re Institute, the research arm of global insurance firm Swiss Re.

The analysts argue that private sector finance must be mobilized to mitigate these risks and adapt to climate change.

Of 36 countries studied, the Philippines is the most impacted by tropical cyclones, [severe thunderstorms](#) and floods, and these hazards are highly likely to intensify here, the report says.

This causes the Philippines annual economic losses (based on property damage) of 3% of GDP—eight times more than any other country.

The U.S. and Thailand are the next worst affected, with GDP losses of around 0.4%. Other Asia Pacific countries in the list include China, Taiwan, India, and Japan, all with GDP losses of around 0.2% or more.

Jérôme Jean Haegeli, group chief economist at Swiss Re, told SciDev.Net, "Tropical cyclones are the major factor for weather-related economic losses in east and south-east Asia.

"The most recent example is Typhoon Haikui which caused widespread devastation in China, Hong Kong, Taiwan and the Philippines in early September 2023."

The Paris Agreement's aim is to keep the global temperature rise this century to well below 2°C above pre-industrial levels and to pursue efforts to limit the [temperature increase](#) to 1.5°C.

However, it is estimated that emissions will continue to rise through 2030, putting the world on a path to 2.7°C warming by 2100, according to [Climate Action Tracker](#).

If global warming remains on the current trajectory, Swiss Re's 2021 report noted that the world could lose 7% to 10% of GDP by 2050.

The report draws on [scientific evidence](#) from the Intergovernmental Panel on Climate Change (IPCC) on the probability of more severe weather conditions in different countries, as well as Swiss Re's insurance knowledge of property damage resulting from natural disasters.

It says that in terms of impact on people's property, the four major weather perils alone result in expected economic losses of US\$200 billion annually.

Risk mitigation

The report emphasizes that risk mitigation through reduced emissions and adaption measures, such as enforcing building regulations, increasing [flood protection](#) and discouraging settlement in natural disaster-prone areas, are fundamental to counter the economic costs of global warming.

"Our analysis shows Thailand to be among countries most susceptible to climate change risk with a high and medium probability of intensification of flash floods and river floods, especially the downstream area of the Chao Phraya River basin," said Haegeli.

But since the devastating floods of 2011, which affected millions of people in the country, Thailand has undertaken various measures to reduce flood risks, he added.

The report makes a case for investing significant financial resources in [climate change mitigation](#) and making private-sector capital part of the financing solution.

"Climate change mitigation requires significant resources," explained Haegeli.

"In 2022, we estimated a cumulative global investment gap of more than US\$270 trillion (US\$9.4 trillion annually) to bring about the economic transformation that would deliver net zero emissions by 2050."

Currently less than 2% of adaptation finance globally comes from private investment, according to the World Bank.

"Climate change mitigation is a global public good and there are limits to the extent that the gap can be government financed," Haegeli added.

The report noted that countries such as China, India, Indonesia, Thailand and the Philippines have large insurance protection gaps, so are likely underprepared to manage the financial fallout of more intense weather shocks in the future.

"In 2022, 86% of Asia's catastrophe losses were uninsured," he added.

Investment 'crucial'

Kathryn Bowen, professor of Environment, Climate and Global Health, and deputy director at Melbourne Climate Futures at the University of Melbourne said, "Private sector investment is crucial for transformative climate action.

"We are seeing some leadership role in this space from the insurance sector, but it needs to be ramped up for risk mitigation.

"In the Asia-Pacific region," she tells SciDev.Net, "climate-related [extreme weather events](#) such as floods, cyclones and heat waves are already creating thousands of additional deaths and illnesses. However, the report doesn't cover other major natural hazards, such as heat waves, that are impacting the region."

She said large parts of South Asia were already feeling the brunt of lengthy heat waves, which were only likely to worsen, affecting health and well-being.

"Heat stress, heatstroke and cardiovascular diseases that are sensitive to heat are already putting a massive burden on [public health services](#) and finances and it is only getting worse with rising temperatures," Bowen added.

"Only rapid decarbonization efforts by heavily polluting countries, coupled with implementation of adaptation solutions, will enable us to safeguard human health and livelihoods."

Storms intensifying

Globally, the IPCC expects tropical cyclones to become more extreme, with increases in both the proportion of the most intense storms (category 3€"5) and peak wind speeds.

Another [study](#) published last month in *PNAS* proposed a category 6 classification for hurricanes as storms become more intense due to climate change.

Michael Wehner, senior scientist at the Lawrence Berkeley National Laboratory and lead author of that research, told SciDev.Net: "Our hypothetical extension to a sixth category is intended to warn the public that the most intense tropical cyclones have become stronger because of

climate change and will continue to do so as the climate changes."

"We encourage people in tropical storm-prone regions to make full use of the verbal and graphical products of the operational forecast centers to assess their personal risk when there is an impending storm," Wehner added.

More information: Changing climates: the heat is (still) on.
[www.swissre.com/institute/rese ... eat-is-still-on.html](http://www.swissre.com/institute/research/eat-is-still-on.html)

Provided by SciDev.Net

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